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1. (Twice Amended) A layered low dielectric constant nanoporous material comprising:
a first layer on the surface of a substrate;
a second layer that comprises a nanoporous material and on the surface of the first layer;
and
a first additional layer at least partially on the surface of the second layer, wherein the structural strength of the layered material increases by at least 100%.
2. The material of claim 1, wherein the low dielectric constant material has a dielectric constant no more than 2.5.
3. The material of claim 1, wherein the first layer substantially comprises a nanoporous material.
4. The material of claim 8, wherein the polymer is organic.
5. The material of claim 4, wherein the polymer comprises polyarylene ether.
8. (Twice Amended) The material of claim 3, wherein the first layer nanoporous material comprises a polymer.
10. The material of claim 1, wherein the second layer substantially comprises a nanoporous polymer.
11. The material of claim 10, wherein the polymer comprises at least one of a polyarylene ether or an adamantane-based compound.
12. The material of claim 1, wherein the additional layer comprises an organic compound.
13. The material of claim 12, wherein the organic compound substantially comprises at least one of a polyarylene ether or an adamantane-based compound.
14. The material of claim 1, wherein the nanoporous material comprises voids having a mean diameter of less than 100 nanometers.
15. The material of claim 1, further comprising a layer of metal wire between the substrate

and the first layer.

17. The material of claim 15, wherein the metal wire is aluminum or copper.
34. (Amended) The material of claim 3, wherein the nanoporous material of at least one of the first layer or the second layer comprises an adamantane-based compound.
35. (Added) The material of claim 3, wherein the nanoporous material of the first layer comprises a first material and the nanoporous material of the second layer comprises a second material.
36. (Added) The material of claim 35, wherein the first material and the second material each comprise a polymer.
37. (Added) The material of claim 35, wherein the first material and the second material each comprise the same polymer.
38. (Added) The material of claim 37, wherein the polymer is an organic polymer.
39. (Added) The material of claim 37, wherein the polymer is an inorganic polymer.
40. (Added) The material of claim 36, wherein the first material comprises an organic polymer and the second material comprises an inorganic polymer.
41. (Added) The material of claim 36, wherein the first material comprises an inorganic polymer and the second material comprises an organic polymer.
42. (Added) The layered material of claim 1, further comprising at least one second additional layer of material coupled to the first additional layer.
43. (Added) The layered material of claim 1, wherein the structural strength increases by at least 200%.